Work Order ID 116668
April-23-14 8:52:50 AM

116668

Item ID: D2521
Revision ID:
Item Name: Individual Bearpaw

Accept *N900040100*

Setup **Start** *NS1*
Stop *NS2*

Start Date: 4/23/14 **Start Qty:** 8.00 *8*
Required Date: 5/07/14 **Req'd Qty:** 8.00 *8*
Reference:

Cust Item ID:
Customer:

Run **Start** *NR1*
Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 14-04-23 **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	**Operation Description**	**Set Up/ Run Hours**	**Tool ID**	**Tool #**	**Plan Code**	**Accept Qty**	**Reject Qty**	**Reject Number**	**Insp. Stamp**

Draw Nbr	**Revision Nbr**
D2521	Rev J

120 *120* Waterjet FLOW CNC Waterjet	FLOW WATER JET **Memo** Cut Blank as per D2521 blank file	0.00 0.00				8	mm	DAS 02 9-89	14/04/29
130 *130* HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 **Memo** 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio and Dwg D2521 Identify as D2521 3-Deburr	0.00 0.00				~~8~~ DAS 02 9-89	~~mm~~		~~14/04/29~~ 14-04-02
140 *140* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB **Memo**	0.00 0.00					14-	04	-02

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Start Date: 4/23/14 **Start Qty:** 8.00 *8*
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Setup **Start** *NS1*
Stop *NS2*
Run **Start** *NR1*
Stop *NR2*

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______
QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC8- Inspect parts - second check Memo ★ SEE ATTACHED	0.00 0.00	G.A 14/05/06			8	0		DAS 08 9-89
160 *160* Packaging Packaging	Identify as per dwg & Stock Location:______ Memo PPP116666	0.00 0.00				14/0/5		(8)	
170 *170* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00				MCJ		14-05-06	

14'05'05

DART AEROSPACE LTD		**Work Order:**	116668
Description: Bearpaw		**Part Number:**	**D2521**
Inspection Dwg: D2521	**Rev:** J		**Page 1 of 1**

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article** ☐ **Prototype**

Inspection Sheet Drawing Dimension			**Actual Dimension**	**Accept**	**Reject**	**Method of Inspection**	**Comments**
Dim	**Min**	**Max**					
A	0.260	0.266	0.260	✓		Vern	RT-4
B	0.90	0.96	0.931	✓			
C	0.27	0.330	0.300	✓			
D	0.470	0.530	0.520	✓			
E	21.740	21.760	21.750	✓		Tape	RT-10
F	0.72	0.780	0.751	✓			
G	0.35	0.410	0.360	✓			
H	11.490	11.570	11.500	✓			
I	3.41	3.47	3.430	✓			
J	11.790	11.810	11.800	✓			
K	9.47	9.53	9.500	✓			
L	7.190	7.210	7.200	✓			
M	6.910	6.970	6.940	✓			
N	44.47	44.530	44.500	✓			
O	6.590	6.650	6.625	✓			
P	0.940	0.980	0.963	✓			
Q	18.97	19.03	19.000	✓			
R	0.350	0.410	0.379	✓			
S	0.740	0.780	0.750	✓			
T	0.240	0.280	0.247	✓			
U	0.370	0.410	0.384	✓			
V	0.740	0.780	0.743	✓			
W	0.740	0.780	0.752	✓			

Measured by:	DAS 02 9-89	**Audited by:**	DAS 08 9-89	**Prototype Approval:**	N/A
Date:	14-04-02	**Date:**	14/05/06	**Date:**	N/A

Rev	**Date**	**Change**	**Revised by**	**Approved**
A	03.09.22	New Issue P/O D205-564-011 & D430-688-011	KJ/RF	
B	05.06.15	Dimensions and tolerances changed	KJ/RF	
C	06.08.31	Dimensions updated per D2521 Rev. J	KJ/JLM	

DART

DESIGN	DRAWN BY CB	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2521 REV. J SHEET 1 OF 3
DATE 06.07.28		TITLE 205 BEARPAW SCALE NTS

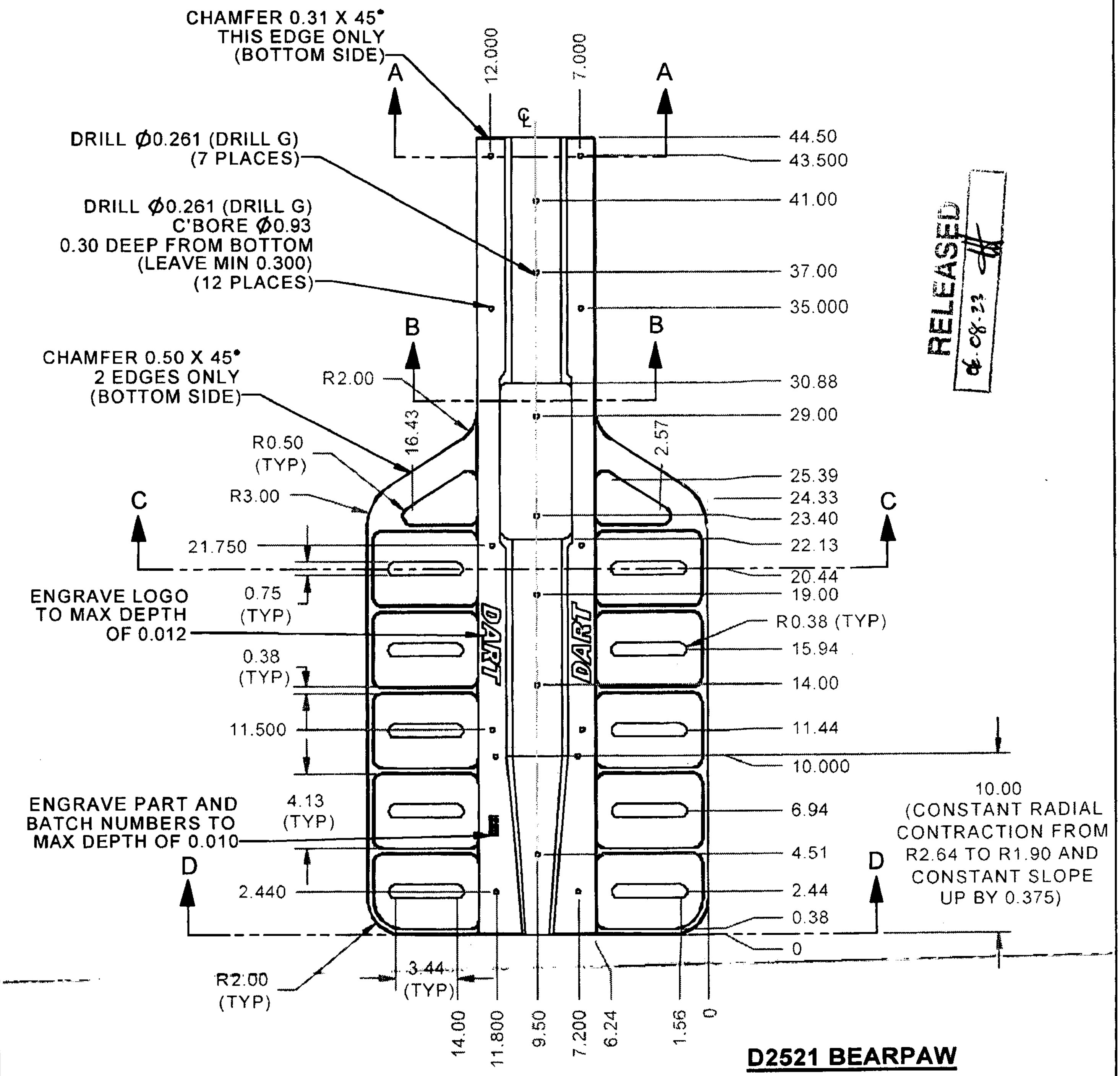
A	95.11.28	NEW ISSUE
B	96.01.11	SHOW BENDING MOVE HOLES
C	96.01.29	ADJUST HOLE LOCATION FOR TOOLING
D	96.05.14	ADJUSTED BEAR PAW THICKNESS
E	96.12.18	43.500 WAS 46.750
F	97.05.07	ADDED REAR POCKET, MOVED HOLES
G	98.08.06	ADD C'BORE AND CHAMFER EDGES
H	03.01.30	CHANGE GEOMETRY FOR RUN-ON LDG.
I	05.05.20	REMOVE BEND; CHANGE TOLERANCES
J	06.07.28	CHANGE FOR FLOAT SKIDTUBE

116668 MLS
14-04-23

RELEASED
06 08.23

DART

DESIGN	DRAWN BY CB	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2521 REV. J SHEET 2 OF 3
DATE 06.07.28		TITLE 205 BEARPAW SCALE 1:8



RELEASED
06-08-23

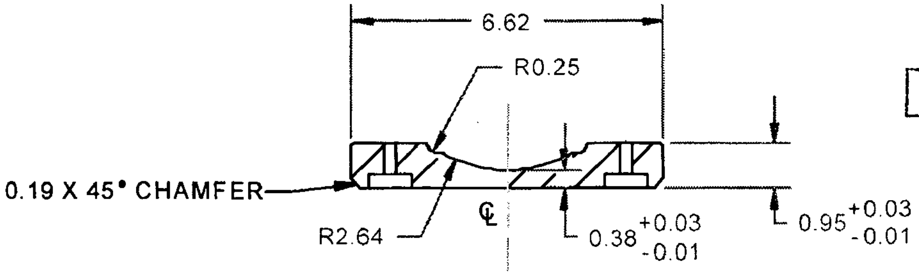
D2521 BEARPAW

NOTES:

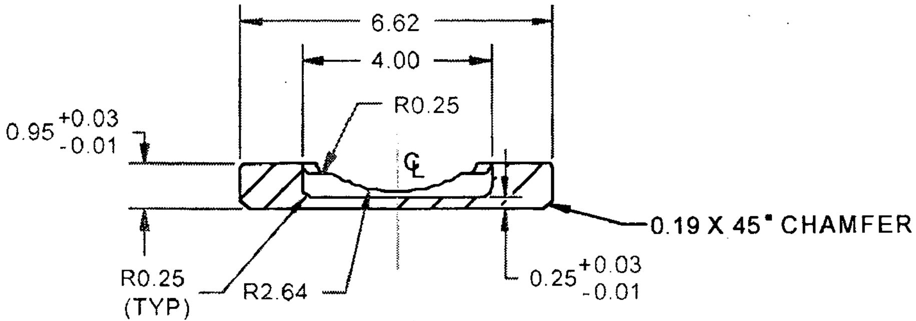
1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK (MACHINE TO 0.950)
2) FINISH: NONE
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.030
6) PART IS SYMMETRIC ABOUT ℄

DESIGN	DRAWN BY CB	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2521 REV. J SHEET 3 OF 3
DATE 06.07.28		TITLE 205 BEARPAW SCALE 1:4

RELEASED
06.08.23



SECTION A-A



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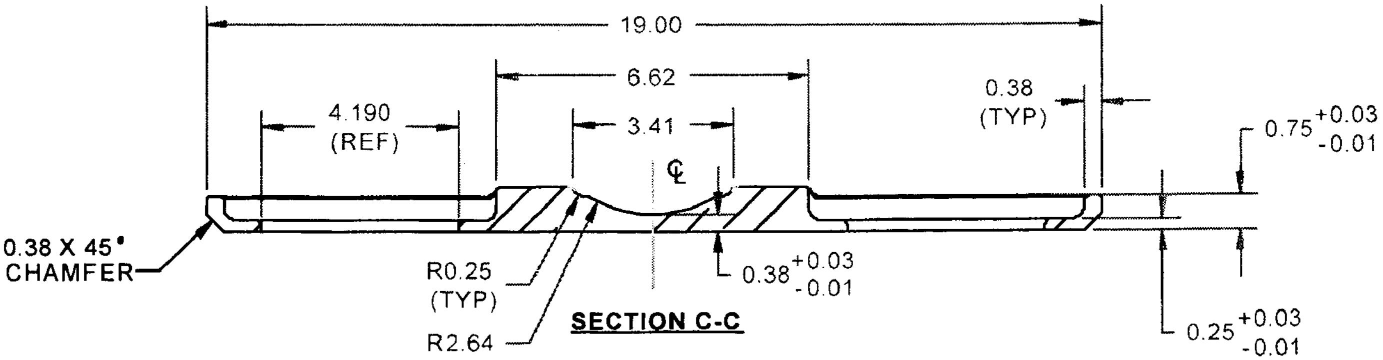
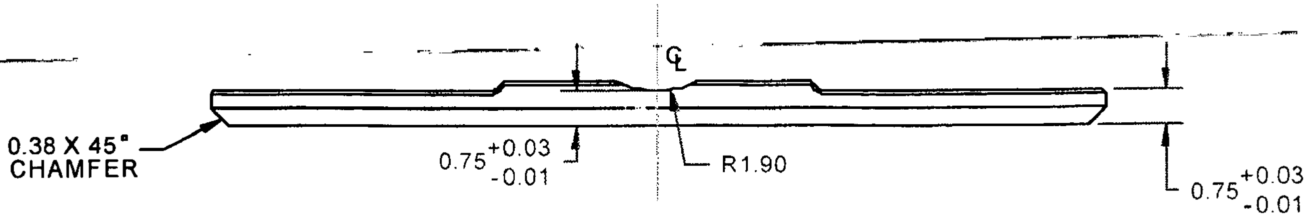


SECTION C-C



SECTION D-D

DQA: AuA Date: 14/05/16

QA Closed: Date: 14/5/9

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 116668

Part No. D2521

NCR No. 14-3834

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☒
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☒
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Operator ☐ Offset/Setup ☒ Process ☒ Supplier ☐ Training ☐ Transport ☐ Unapproved ☐	14/5/5	130	8	0.25 pocket thickness is down to 0.225 near edge of part. RC. ~~Set up~~/ Machining Process / unable to hold Part Down in that Area.	DAS 12 9-89 14/5/5	Acceptable. Edge only. Not high stress area, most ~~[illegible]~~ wear will be in middle area.	DAS 12 9-89 14/5/5	DAS 08 9-89 D.A 14/05/06	DAS 27 9-39 14/5/5

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☒ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☒ Other

machin Process

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH